Triage and Evacuation of High-Risk Pilgrims at Surabaya Debarkation in 2024: Case Report

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Abstract Triage activity is a fundamental function in emergency departments (EDs), who are many patients may come at the same time. The purpose of the triage system is to ensure that patients will be treated according to their clinical urgency, which refers to the time critical interventions. Primary triage or field triage usually use simple triage techniques and rapid treatment that relies on rapid assessment of respiratory status, perfusion, bleeding control, and mental status. In these cases, it is still not in line with the rules for triage, which classification prioritizes patients with wheelchairs who need immediate treatment to be evacuated first. To overcome is these challenges, the solution that can be provided is coordination between the airline and the Indonesian Hajj Health team, to be able to ensure pilgrims get immediate treatment, so that they can be quickly evacuated. Handling of patients with the red category have to done immediately and patients with the green category who use wheelchairs will treat after that. In debarkation field triage applied as primary triage with a purpose to determine priority of treatment at the scene and to transport patients to the hospital immediately. So that the role of the process on mobilizing pilgrims with wheelchairs from the plane to the bus can be improved by referring to the triage process.

Keywords Triage; Evacuation; Mobilization wheelchair; Hajj; Pilgrims

1. Introduction

Health is important for pilgrims to conduct the Hajj pilgrimage. Without healthy and adequate condition, the worship process will not be maximized. Therefore, every pilgrim needs to prepare themselves and their knowledge related to Hajj health in order to have optimal health status and maintain it (Anditiarina, 2022).

Indonesia is one of the countries with the largest Muslim population in the world. Indonesia always actively organizes the Hajj pilgrimage every

year. However, there are several health problems faced by pilgrims in the form of pilgrims' conditions during the pilgrimage. The health risks of elderly pilgrims, the threat of disease transmission in Saudi Arabia, and the availability of health services. Influenced the implementation of the Hajj pilgrimage. Mortality risk during the Hajj can be influenced by many factors, which are interrelated with each other. Risk factors faced by pilgrims can be in the form of diseases that have been diagnosed since the pre-departure examination, health service, behaviour, environmental and transmission of infectious diseases. That may be carried out by another pilgrims (Handayani, 2017).

Mobilization of pilgrims with wheelchairs at the airport requires careful coordination. Pilgrims who require wheelchairs such as elderly and physically limitation need special attention, so that they can perform the Hajj pilgrimage until they return home safely despite their limitations.

The mobilization process starts from getting off the plane until the pilgrims are seated on the bus that will take them to the Hajj hostel. The success of this mobilization flow depends on coordination between various parties, including airport officials, airlines, and health workers. The use of appropriate technology and mobilization aids is also helpful in improving the efficiency and safety of this process (Handayani, 2019). In supporting the safety and health of pilgrims, it is important to place each pilgrim according to their risk factor follow the triage process. Therefore, it is important to discuss the flow of triage in pilgrims who use wheelchairs from the plane to the bus at the airport based on the flow of urgency (Elbaih, 2017).

2. Methods

This case report is a report of triage and evacuation of high-risk pilgrims at Surabaya disembarkation in the Juanda's Airport which was conducted on June 23, 2024.

3. Case Report

Pilgrims from SUB10 group from Pacitan regency was arrived on Sunday, June 23, 2024. There were nineteen pilgrims who use wheelchairs. The plane arrived at Juanda International Airport at 04.50 WIB. Panitia Penyelenggara Ibadah Haji (PPIH) health officers at the airport find out there was one pilgrim who needed immediate treatment with high-risk criteria. Mrs M, 77 years old, she complained has shortness of breath for one day before departure. For a cough with phlegm but difficult to expel. The patient also felt weakness that was felt for one week. The patient had pneumonia while in Mecca and when examined on board by doctor, the blood pressure was 107/91 mmHg, pulse 124 times/minute, temperature 38.2 C. respiratory rate 30 times/minute and SpO2 86% on room air. During physical examination, there were rhonchi sounds in all lung fields. The pilgrim mobilization carried out by airport officials based on the seat position on the plane which is close to the exit door. This procedure purpose to suplify process to get off via incapacitated passenger lift. So that the

handling of Mrs. M became late, because she had to wait for the queue of pilgrims who used other wheelchairs. After the patient got off from the plane, the doctor on ambulance immediately treated the patient by applying oxygen mask with 4 litters/minute dose and intravenous access with 500 cc normal saline fluid. After the patient arrived to the clinic at debarkation Surabaya, she received combivent nebulizer treatment to reduce the shortness of breath.

4. Discussion

Coordination between the Indonesian Hajj Health Team, Port Health Office officers and Ground Handling is important in evacuate patients who require special needs to be further examination. According to the concept of triage, that is defined as a dynamic decision-making process that prioritizes a patient's need for medical care. Primary triage or field triage use simple and rapid techniques that rely on rapid assessment of respiratory status, perfusion, bleeding control, and mental status. Patients are then prioritized to immediate care, delayed care, or death.

Based on the Guideline for the Field Triage of Injured Patients 2021 from the American College of Surgeons, the patient Mrs. M with 86% of saturation and 30 times/minute respiratory rate, has high red criteria. Based on the Field Triage Decision Scheme flow, this patient is required to be evacuated immediately, to be given initial management, and transported to the nearest emergency room. The patient should immediately receive treatment at the airport according to the triage flow that has been described. However, in the field, the flow of patient evacuation is only based on the use of wheelchairs and prioritizes according to the seats close to the aircraft exit, not based on the level of severity (Airport Council International, 2018).

There are several officers who work together in the mobilization of passengers with wheelchairs at the airport. First, airport officials who have to ensure the comfortable and safety of wheelchair users. Their duties include assistance at the airport entrance, handling security, and helping wheelchair users to reach their departure gate (Christian, 2019).

Second, airport health workers that also have an important role in providing medical assistance and overseeing the safety of wheelchair users. They should be ready to provide emergency medical assistance and assist in managing any special health needs (IATA, 2017).

Trained airport staff will pick up the pilgrims with wheelchairs at the aircraft door or near the passenger seat. The pilgrims will be assisted by using a special elevator called the Incapacitated Passenger Lift (IPL) to the bus. In another situation, the airport staff will take the passenger directly use the jet bridge to transfer from the aircraft directly to the terminal (IATA, 2017).

After disembarking from the plane, passengers will be directed to the arrival area at the airport. Here, staff will organize a special lane for passengers with wheelchairs to facilitate their movement. These lanes are usually equipped with clear signs and instructions as well as wider access

for wheelchairs to pass smoothly. Airport officials are also ensured the lane is not obstructed by other items or people that might interfere with the smooth mobilization of passengers (Kemenkes, 2016).

It should be necessary to sort out patients with high risk to descend first compared to patients who use wheelchairs in a stable condition. To overcome these challenges, the solution that can be provided is coordination between the airline and the Indonesian Hajj Health team to be able to ensure pilgrims who need immediate treatment, so that they can be quickly evacuated (Newgard, 2022).

So that handling of patients with the red category can be done immediately and then followed by patients with the green category who use wheelchairs. While in the ambulance, the patient can be immediately assessed by the medical staff of the health quarantine center. The assessment starting from the airway by ensuring there is no obstruction and the patient administrated oxygen by a simple mask to reduce complaints of tightness and given nebul ipratropium bromide and salbutamol sulfat to dilute sputum. For circulation assessment, NS infusion was given to restore electrolytes in the body, making the patient healthier. After initial treatment has been given, the patient is immediately referred to a health facility for further monitoring until the condition stabilizes (Sasser, 2014 dan Tintinalli, 2016).

5. Conclusion

Triage is a very important system to implement in the emergency department. Many patients arrive at the same time, so it is necessary to implement triage. Likewise, the triage carried out in the field also emphasizes the classification of patients with high-risk red criteria to get immediate treatment. The purpose of the triage system is to ensure that patients will be treated according to their clinical urgency, which refers to the need for urgent intervention. At the debarkation of Hajj pilgrims, it is important to activate the Emergency Medical Service as an initial effort to treat and transport someone who is in an emergency situation that may be life-threatening. In debarkation, the aim of is to activated field the priority of treatment at the scene and refer of patients to the hospital immediately. The field triage currently known is still based on the Guideline for the Field Triage of Injured Patients 2021 from the American College of Surgeons which is divided into (High Risk Red Criteria) and (low risk Yellow Criteria), and the field triage decision Scheme flow. So that the role of the process of mobilizing pilgrims with wheelchairs from the plane to the bus can be improved by referring to the triage process.

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